Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A process for formation of a layer of tantalum pentoxide (Ta_2O_5) on a carrier material, comprising:

heating carrier material to a heating temperature of between approximately 200°C and 400°C; and

circulating a gas mixture comprising tert-butyliminotris (diethylamino) tantalum ($C_{16}H_{39}N_4Ta$) (t-BuN=Ta(NEt_2)$_3$) in contact with the heated carrier material under an oxidizing atmosphere thereby forming a layer of tantalum pentoxide (Ta_2O_5) on the carrier material, the partial pressure of the tert-butyliminotris (diethylamino) tantalum being greater than or equal to 25 mTorr.

2. (Original) The process according to Claim 1, wherein the heating temperature is between approximately 300°C and 350°C.

3. (Original) The process according to Claim 1, wherein the gas mixture is circulated in a chamber in which the carrier material is placed and in that the partial pressure of the tert-butyliminotris (diethylamino) tantalum is less than the vapor pressure of tert-butyliminotris (diethylamino) tantalum corresponding to the temperature of the coldest point in the chamber.